

APPARATUS AND METHOD FOR REPORTING PROGRAM  
HALTS IN AN UNPROTECTED PIPELINE AT NON-  
INTERRUPTIBLE POINTS IN CODE EXECUTION

**Abstract of the Invention**

1 In a target processor having a non-protected pipeline, the  
2 execution code is typically provided with interruptible  
3 code portions and with non-interruptible code portions.  
4 The non-interruptible code portions prevent implementation  
5 of a real time interrupt that would corrupt the code so  
6 that execution could not be resumed. A storage unit is  
7 provided that stores a signal permitting a code execution  
8 halt even during a non-interruptible code portion. In this  
9 manner, a program developer can determine the status of the  
10 processor at any point in the code execution. When the  
11 execution halt is initiated during a non-interruptible code  
12 segment, a bit is set in a bit position of a memory-mapped  
13 register. This bit position can be transferred from the  
14 target processor to the host processing unit during a  
15 transfer of status data.